XML Registry Submission Pkg Training

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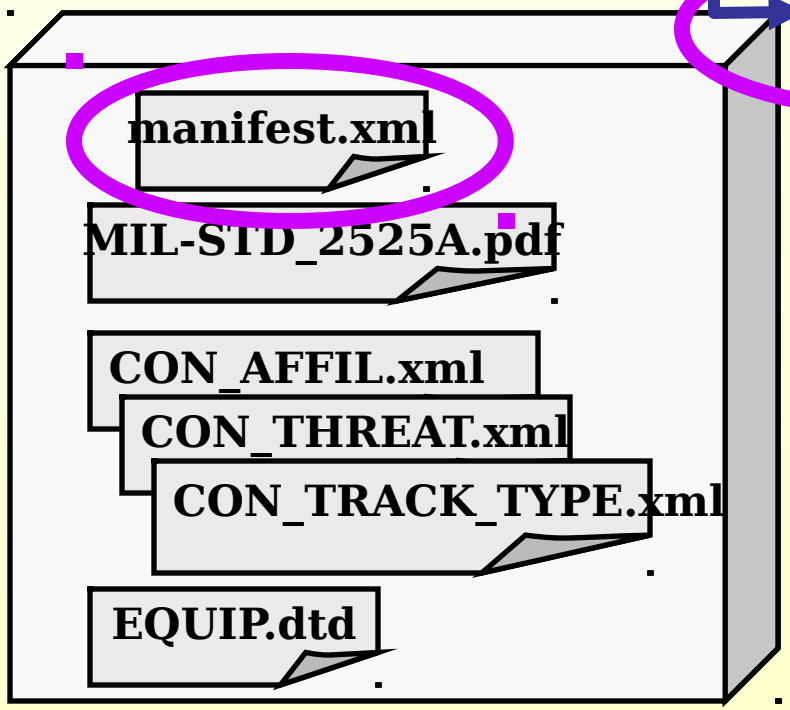
Now available...

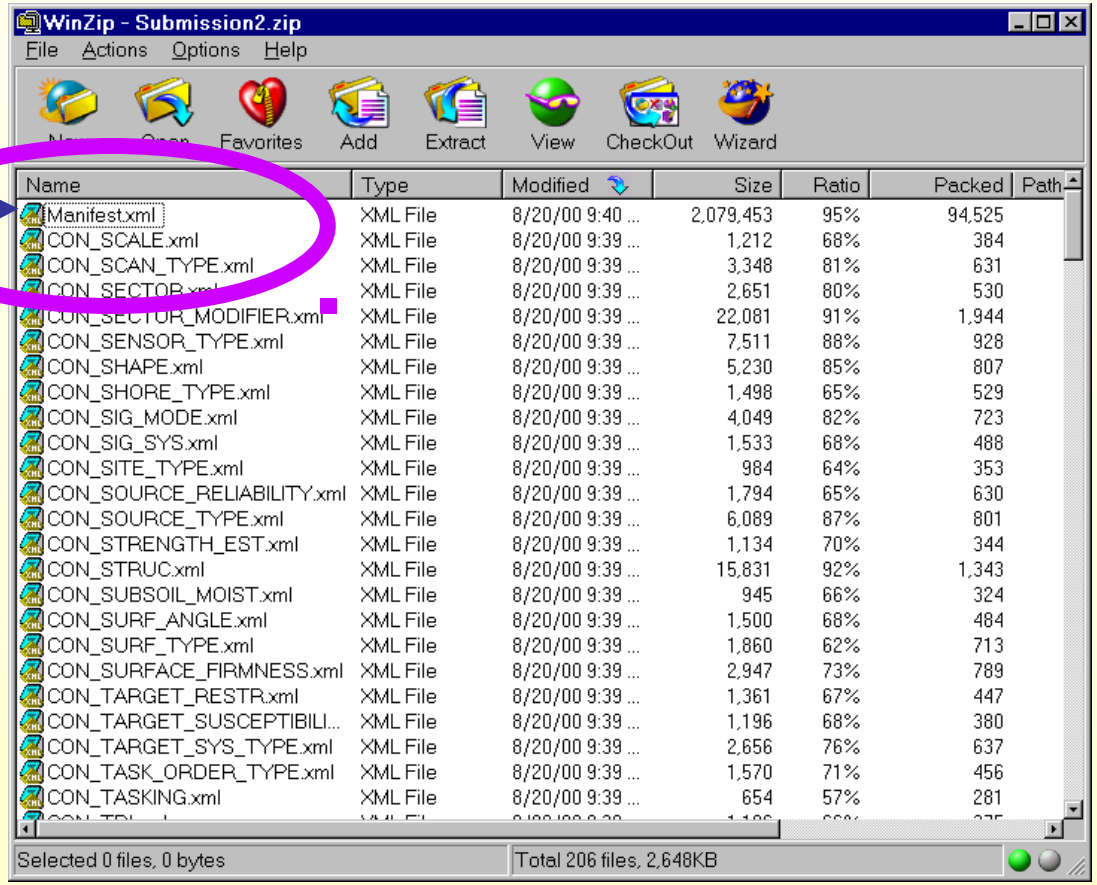
- New DTDs
  - registry.dtd
  - registry_domain_values.dtd
- Updated Registry Submission Package Sample
  - Manifest
  - DTD
  - Domain Document
  - Other Document
- Registry Submission Assistance Tool
  - Leverage existing metadata products

Registry Submission Package

- Package Contains
  - 1 manifest (XML)
  - 0+ docs
  - 0+ domain docs (XML)
  - 0+ schemas

Submission.zip




WinZip - Submission2.zip
File Actions Options Help
Favorites Add Extract View CheckOut Wizard
Name Type Modified Size Ratio Packed Path
Manifest.xml XML File 8/20/00 9:40 ... 2,079,453 95% 94,525
CON_SCALE.xml XML File 8/20/00 9:39 ... 1,212 68% 384
CON_SCAN_TYPE.xml XML File 8/20/00 9:39 ... 3,348 81% 631
CON_SECTOR.xml XML File 8/20/00 9:39 ... 2,651 80% 530
CON_SECTOR_MODIFIER.xml XML File 8/20/00 9:39 ... 22,081 91% 1,944
CON_SENSOR_TYPE.xml XML File 8/20/00 9:39 ... 7,511 88% 928
CON_SHAPE.xml XML File 8/20/00 9:39 ... 5,230 85% 807
CON_SHORE_TYPE.xml XML File 8/20/00 9:39 ... 1,498 65% 529
CON_SIG_MODE.xml XML File 8/20/00 9:39 ... 4,049 82% 723
CON_SIG_SYS.xml XML File 8/20/00 9:39 ... 1,533 68% 488
CON_SITE_TYPE.xml XML File 8/20/00 9:39 ... 984 64% 353
CON_SOURCE_RELIABILITY.xml XML File 8/20/00 9:39 ... 1,794 65% 630
CON_SOURCE_TYPE.xml XML File 8/20/00 9:39 ... 6,089 87% 801
CON_STRENGTH_EST.xml XML File 8/20/00 9:39 ... 1,134 70% 344
CON_STRUC.xml XML File 8/20/00 9:39 ... 15,831 92% 1,343
CON_SUBSOIL_MOIST.xml XML File 8/20/00 9:39 ... 945 66% 324
CON_SURF_ANGLE.xml XML File 8/20/00 9:39 ... 1,500 68% 484
CON_SURF_TYPE.xml XML File 8/20/00 9:39 ... 1,860 62% 713
CON_SURFACE_FIRMNESS.xml XML File 8/20/00 9:39 ... 2,947 73% 789
CON_TARGET_RESTR.xml XML File 8/20/00 9:39 ... 1,361 67% 447
CON_TARGET_SUSCEPTIBILI... XML File 8/20/00 9:39 ... 1,196 68% 380
CON_TARGET_SYS_TYPE.xml XML File 8/20/00 9:39 ... 2,656 76% 637
CON_TASK_ORDER_TYPE.xml XML File 8/20/00 9:39 ... 1,570 71% 456
CON_TASKING.xml XML File 8/20/00 9:39 ... 654 57% 281
Selected 0 files, 0 bytes
Total 206 files, 2,648KB

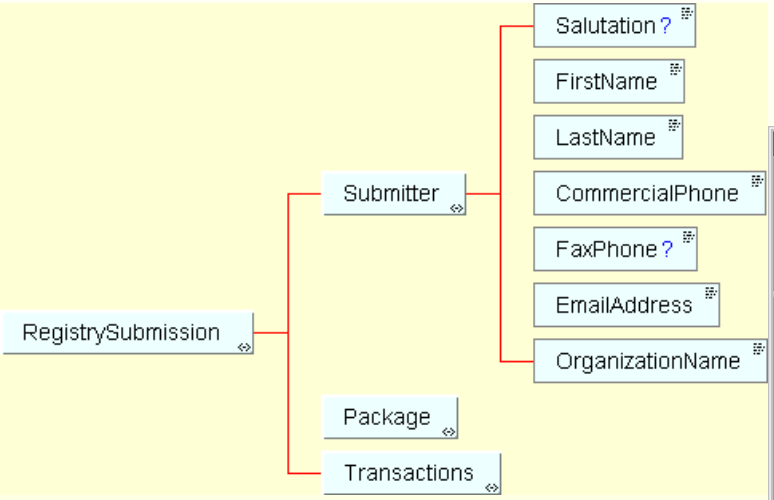
Manifest

http://diides.ncr.disa.mil/xmlreg/DTD/registry.dtd

- Submitter
- Package
- Transactions
  - AddTransaction

Diagrams produced by XML Authority – www.extensibility.com

Part 1
Documenting the Submitter



C:\WINDOWS\Desktop\SHADE\Gallery\test11a.xml - Microsoft Internet Explorer - [Working Offline]

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

Address C:\WINDOWS\Desktop\SHADE\Gallery\test11a.xml Go Links

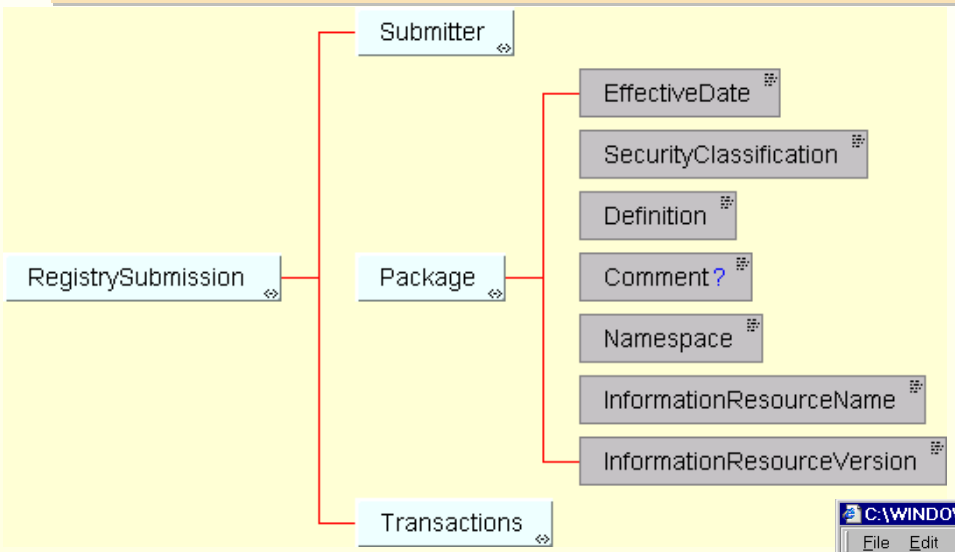
```
<?xml version="1.0" ?>
<!DOCTYPE RegistrySubmission (View Source for full doctype...)>
- <RegistrySubmission>
  + <!--  -->
  - <!--

            All submission documents must begin with information about the
            submitter. The First Name, Last Name, CommericalPhone,
            Email Addresss and Organization Name tags are mandatory


    -->
  - <Submitter>
      <Salutation>Mr.</Salutation>
      <FirstName>Kirk</FirstName>
      <LastName>Maskalenko</LastName>
      <CommercialPhone>703-478-9881</CommercialPhone>
      <FaxPhone>703-478-9883</FaxPhone>
      <EmailAddress>kirkm@fgm.com</EmailAddress>
      <OrganizationName>FGM Inc.</OrganizationName>
    </Submitter>
  + <Package>
  + <Transactions>
  </RegistrySubmission>
```

My Computer

Part 2
Documenting the Package



C:\WINDOWS\Desktop\SHADE\Gallery\test11a.xml - Microsoft Internet Explorer - [Working Offline]

File Edit View Favorites Tools Help

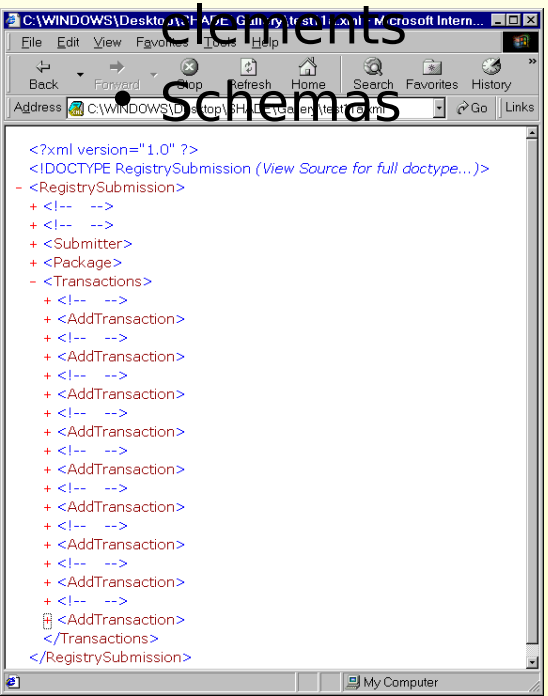
Back Forward Stop Refresh Home Search Favorites History Mail Print Edit Discuss

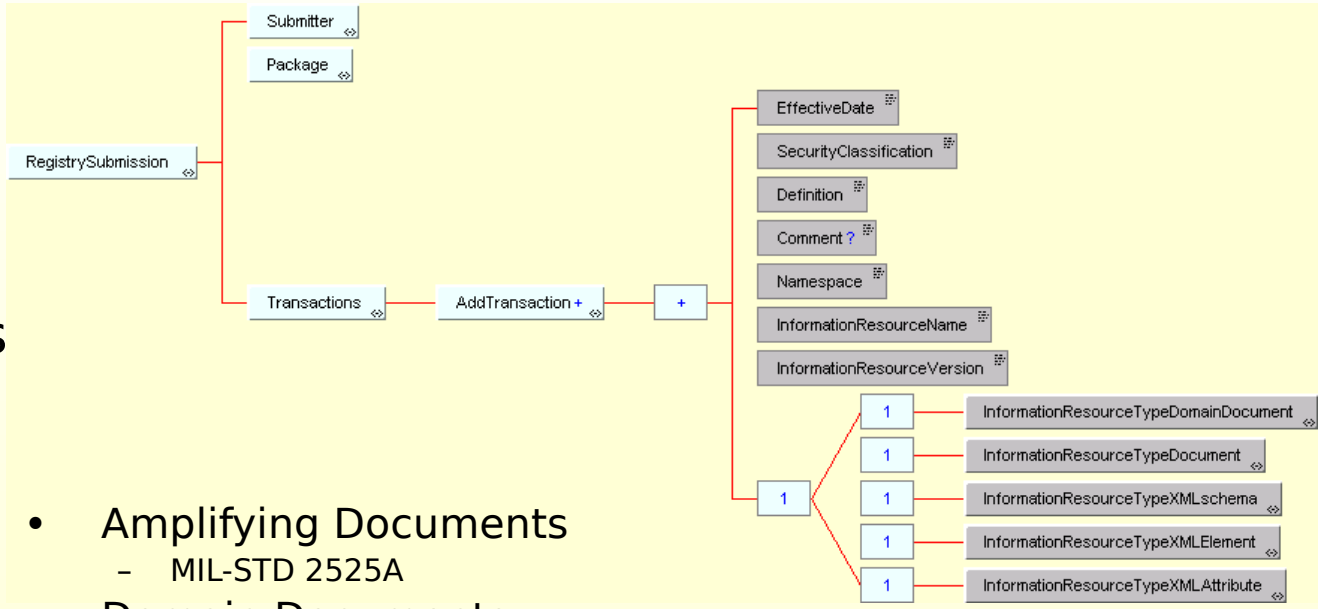
Address C:\WINDOWS\Desktop\SHADE\Gallery\test11a.xml Go Links

```
<?xml version="1.0" ?>
<!DOCTYPE RegistrySubmission (View Source for full doctype...)>
- <RegistrySubmission>
  + <!--  -->
  + <!--  -->
  + <Submitter>
  - <Package>
      <EffectiveDate>08/10/2000</EffectiveDate>
      <SecurityClassification>Unclassified</SecurityClassification>
      <Definition>Package submitted by...</Definition>
      <Namespace>COE</Namespace>
      <InformationResourceName>GMI001</InformationResourceName>
      <InformationResourceVersion>1.0.0</InformationResourceVersion>
    </Package>
  + <Transactions>
  </RegistrySubmission>
```

Part 3
Documenting the Contents

- Order **NOT** Important
  - Generic docs
  - Domain docs
  - Atomic elements
  - Container elements
  - Schemas

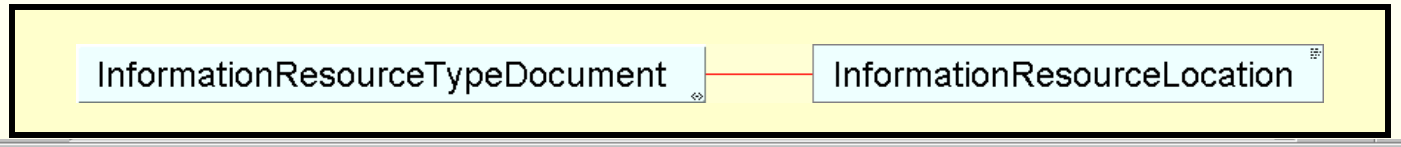




- Amplifying Documents
  - MIL-STD 2525A
- Domain Documents
  - CON_AFFILIATION
- Information Resources
  - Atomic: CON_ITEM_AVAIL
  - Container: EQP
- Schemas
  - EQUIP.DTD

Information Resource: Amplifying Document

InformationResourceTypeDocument



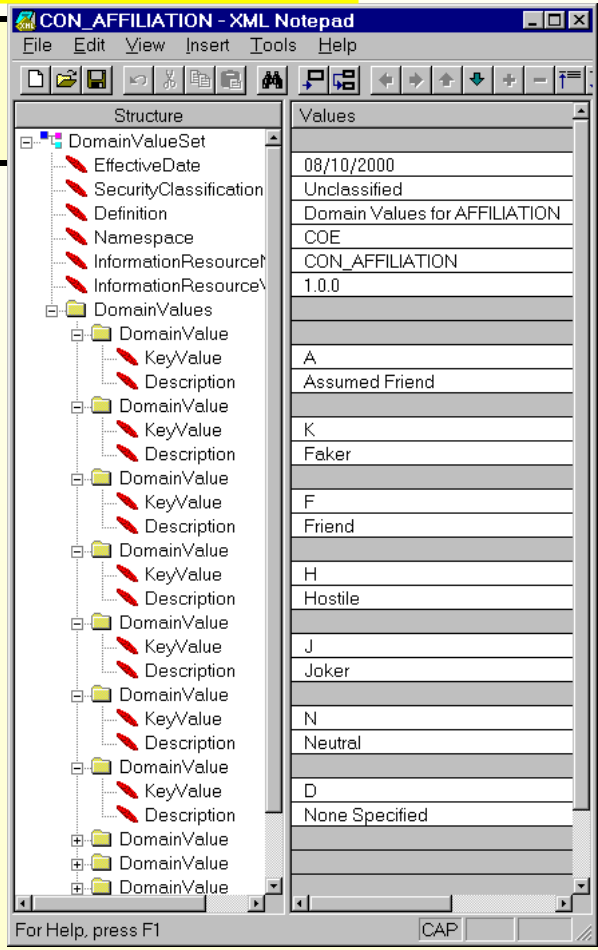

```
<?xml version="1.0" ?>
<!DOCTYPE RegistrySubmission (View Source for full doctype...)>
- <RegistrySubmission>
  + <!--  -->
  + <!--  -->
  + <Submitter>
  + <Package>
  - <Transactions>
    + <!--  -->
    + <AddTransaction>
    + <!--  -->
    - <AddTransaction>
        <EffectiveDate>1 May 2000</EffectiveDate>
        <SecurityClassification>Unclassified</SecurityClassification>
        <Definition>All about locations, a DOD Reference</Definition>
        <Comment>GSA Press</Comment>
        <Namespace>COE_Enterprise</Namespace>
        <InformationResourceName>AllAboutLocations</InformationResourceName>
        <InformationResourceVersion>1.0.0</InformationResourceVersion>
      - <InformationResourceTypeDocument>
          <InformationResourceLocation>locations.pdf</InformationResourceLocation>
        </InformationResourceTypeDocument>
      </AddTransaction>
    + <!--  -->
    + <AddTransaction>
    + <!--  -->
```

Information Resource: Domain Value Document

InformationResourceTypeDomainDocument

InformationResourceTypeDomainDocument — InformationResourceLocation

```
<?xml version="1.0" ?>
<!DOCTYPE RegistrySubmission (View Source for full doctype...)>
- <RegistrySubmission>
  + <Submitter>
  + <Package>
  - <Transactions>
    + <AddTransaction>
    + <AddTransaction>
    + <AddTransaction>
    + <AddTransaction>
    + <AddTransaction>
    + <AddTransaction>
    - <AddTransaction>
        <EffectiveDate>08/10/2000</EffectiveDate>
        <SecurityClassification>Unclassified</SecurityClassification>
        <Definition>Domain Values for AFFILIATION</Definition>
        <Namespace>COE</Namespace>
        <InformationResourceName>CON_AFFILIATION</InformationResourceName>
        <InformationResourceVersion>1.0.0</InformationResourceVersion>
      - <InformationResourceTypeDomainDocument>
          <InformationResourceLocation>CON_AFFILIATION.xml</InformationResourceLocation>
        </InformationResourceTypeDomainDocument>
      </AddTransaction>
    + <AddTransaction>
    - <AddTransaction>
```



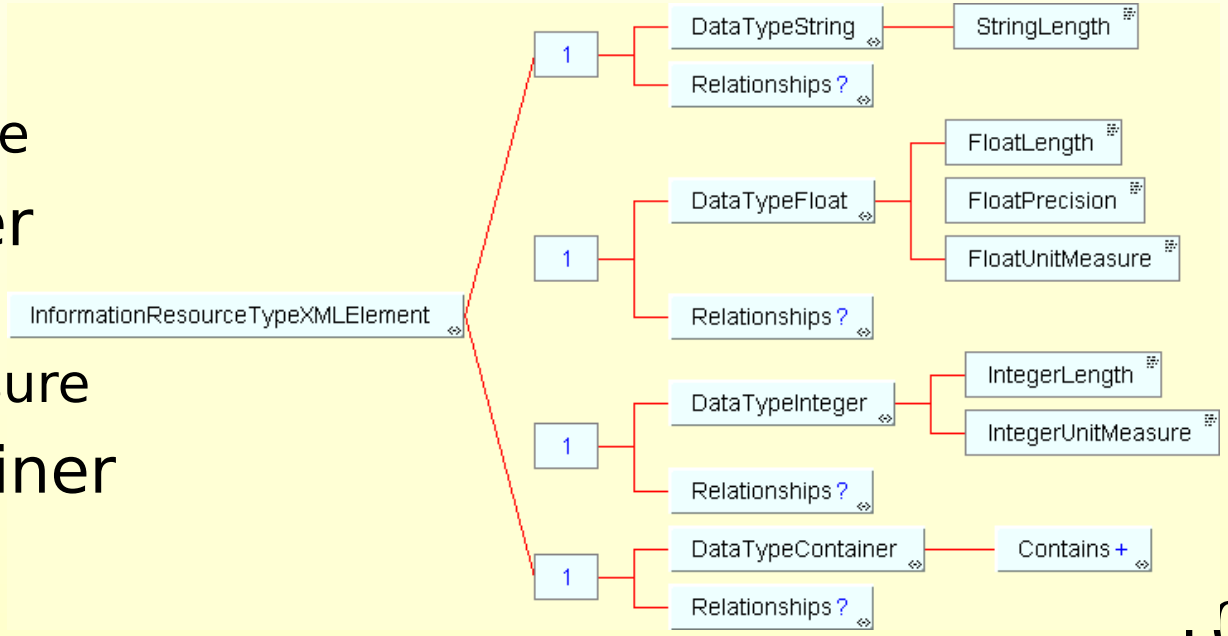
MS XML Notepad – www.micros

Information Resource: XML Element

InformationResourceTypeXMLElement

- Valid Data Types:
  - DataTypeString
    - StringLength
  - DataTypeFloat
    - FloatLength
    - FloatPrecision
    - FloatUnitMeasure
  - DataTypeInteger
    - IntegerLength
    - IntegerUnitMeasure
  - DataTypeContainer
    - Contains

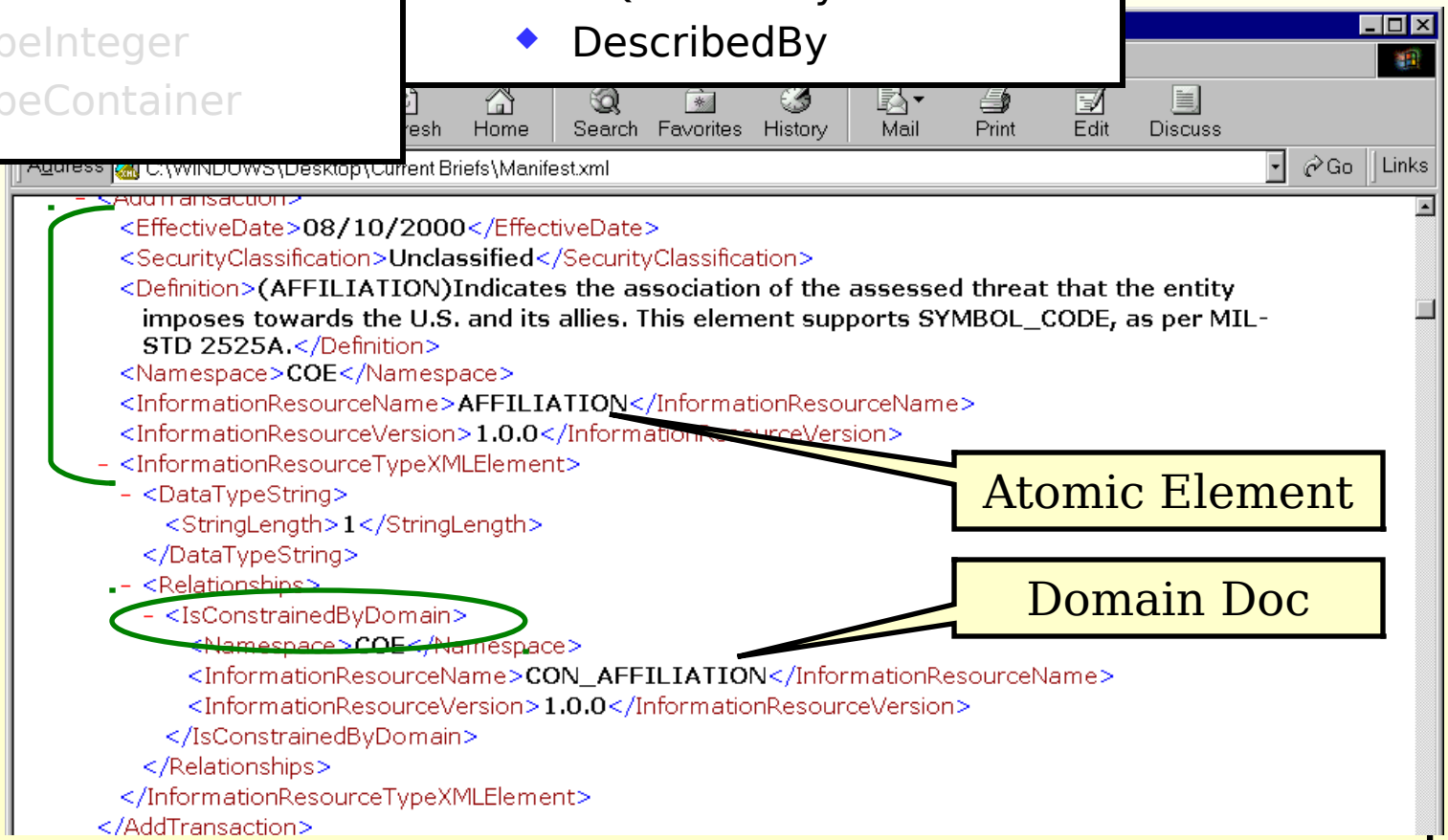
- Valid Relationships:
  - IsNewerVersionOf
  - IsConstrainedByDomain
  - IsQualifiedByAttribute
  - DescribedBy



Example:
Atomic Element (string) Constrained by Domain

- Valid Data Types:
  - DataTypeString
    - StringLength
  - DataTypeFloat
  - DataTypeInteger
  - DataTypeContainer

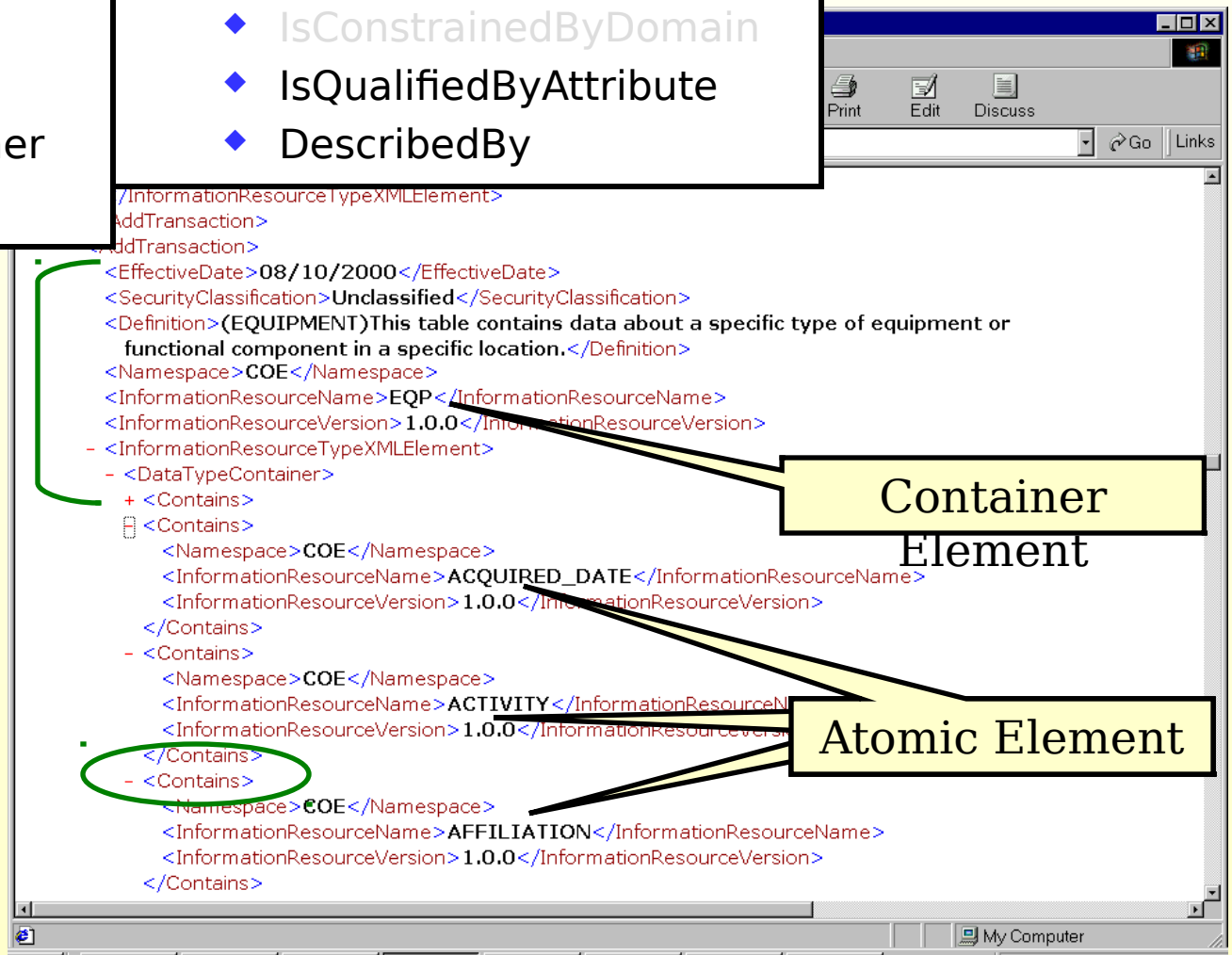
- Valid Relationships:
  - IsNewerVersionOf
  - IsConstrainedByDomain
  - IsQualifiedByAttribute
  - DescribedBy



Example:
Container Element Contains Atomic Element

- Valid Data Types:
  - DataTypeString
  - DataTypeFloat
  - DataTypeInteger
  - DataTypeContainer
    - Contains

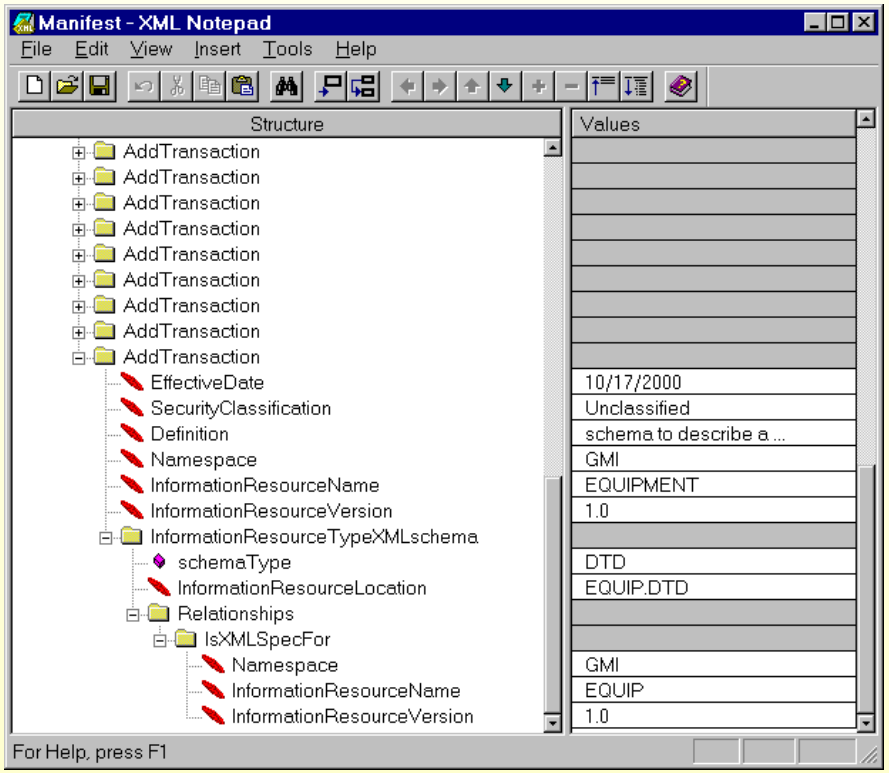
- Valid Relationships:
  - IsNewerVersionOf
  - IsConstrainedByDomain
  - IsQualifiedByAttribute
  - DescribedBy



Information Resource: XML schema

InformationResourceTypeXMLschema

- schemaType:
  - **DTD**
  - RDF
  - SOX
  - XDR
  - DCD
  - DML
  - BIZ
  - XSD
  - OSC

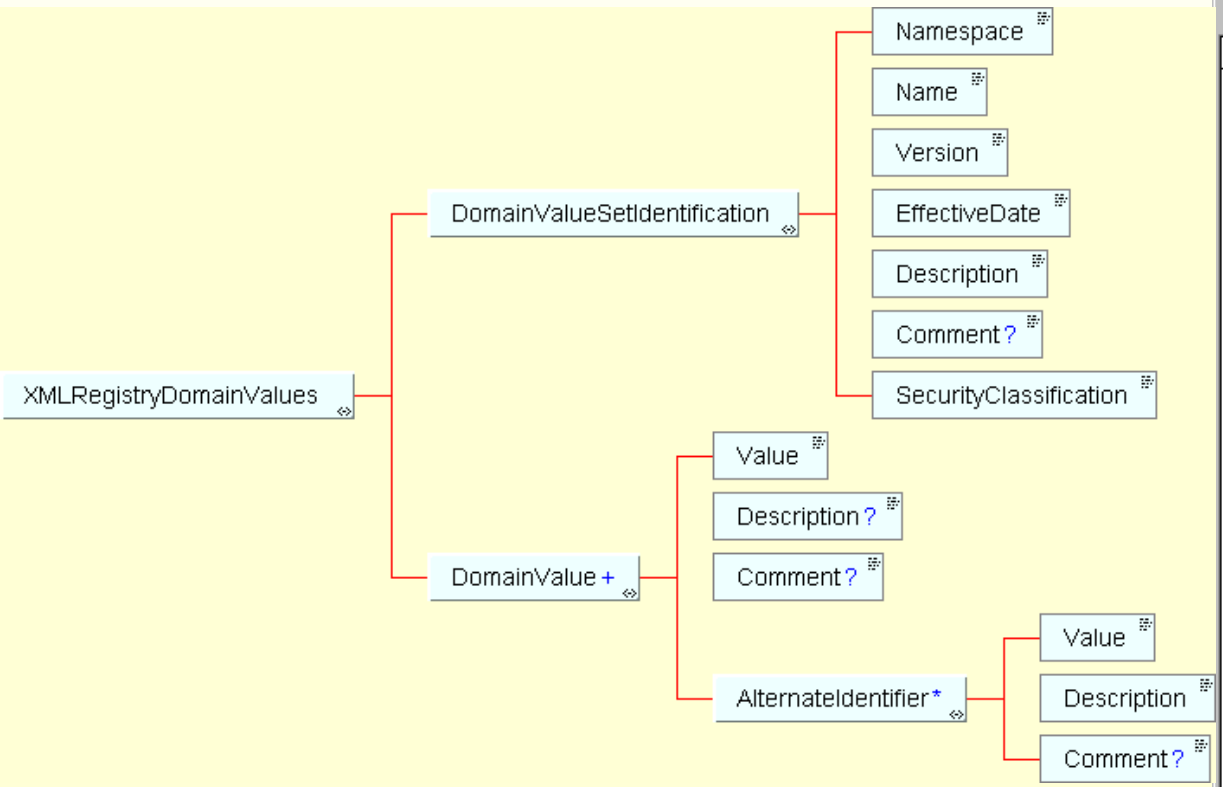


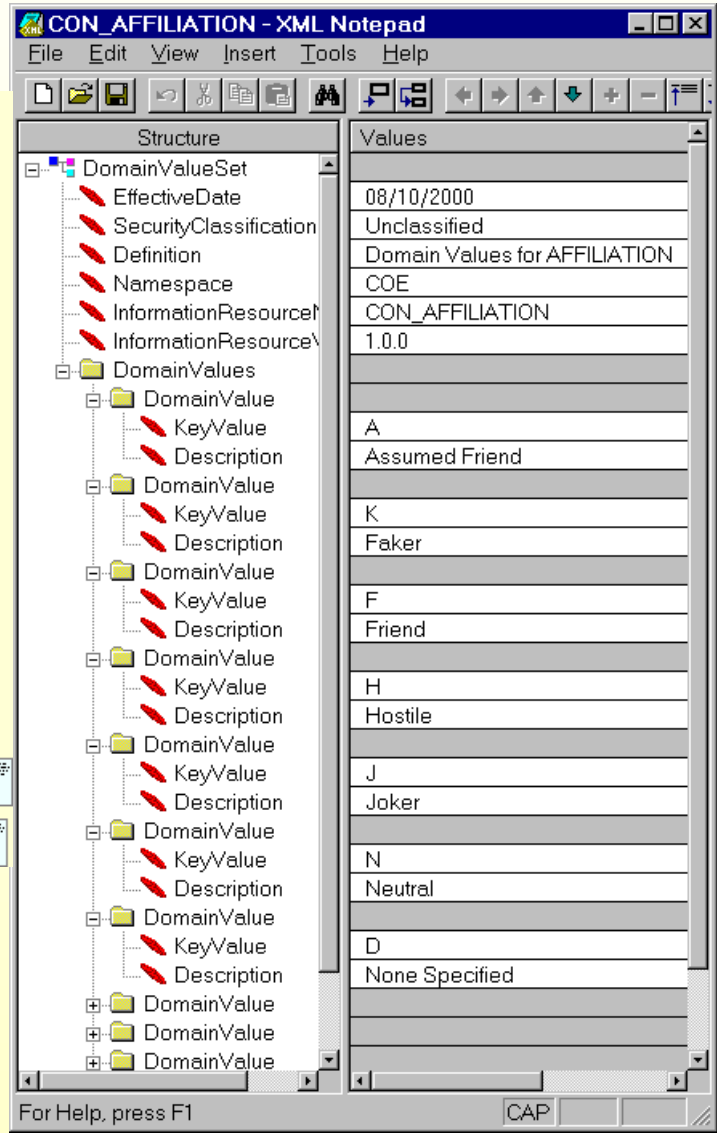
- Valid Relationships:
  - IsNewerVersionOf
  - IsXMLSpecFor
  - DescribedBy

SHADE Recommendation: Associate schema to Root Element Only

Documenting Domain Values

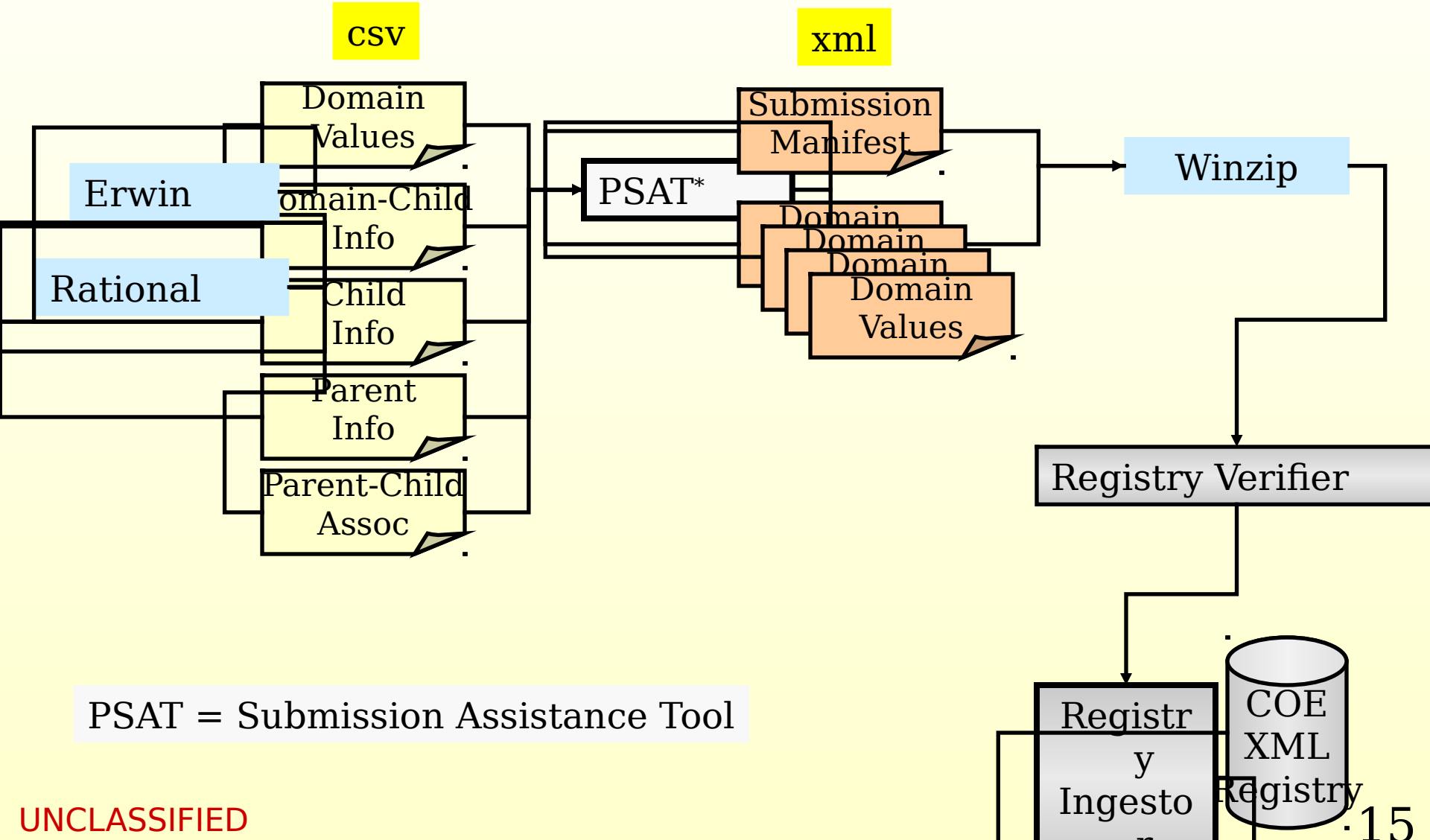
http://diides.ncr.disa.mil/xmlreg/DTD/registry_domain_values.dtd





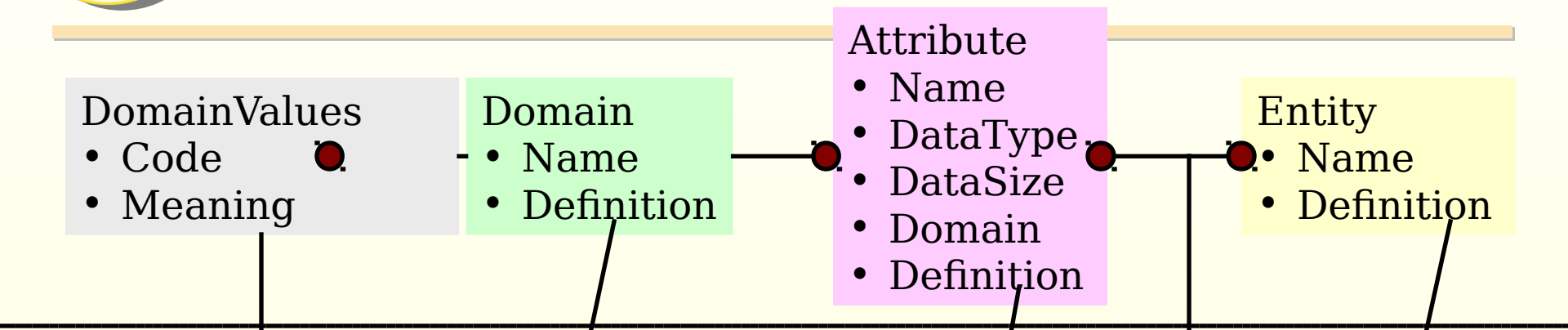
UNCLASSIFIED

Registry Submission Assistance



PSAT = Submission Assistance Tool

Inputs to Registry Submission




```
CON_AFFILIATION,A,Assumed Friend
CON_AFFILIATION,K,Faker
CON_AFFILIATION,F,Friend
CON_AFFILIATION,H,Hostile
CON_AFFILIATION,J,Joker
CON_ALERT,HIT,High Interest Track
CON_ALERT,NSP,Cleared Suspect
CON_ALERT,NUL,No Alert
```

```
FAC, BE_NUMBER
FAC, ADDRESS_NAME
FAC, ILAT
```

```
CON_AFFILIATION,
CON_AKA_TYPE,
RUL_FREE_TEXT_EXP, Special characters are...
```

```
AFFILIATION,char,1,CON_AFFILIATION, Indicates the association of the...
ADDRESS_NAME, varchar,54, RUL_FREE_TEXT_EXP, The name of the address or the...
```

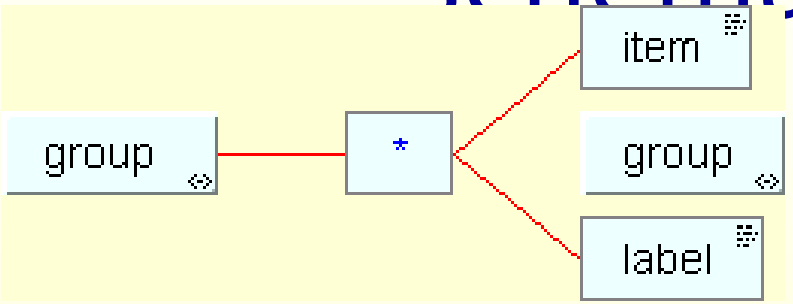
```
FAC, This table contains data about a facility or an installation. A...
FAC_BEACH, This table contains information about a facility beach.
```

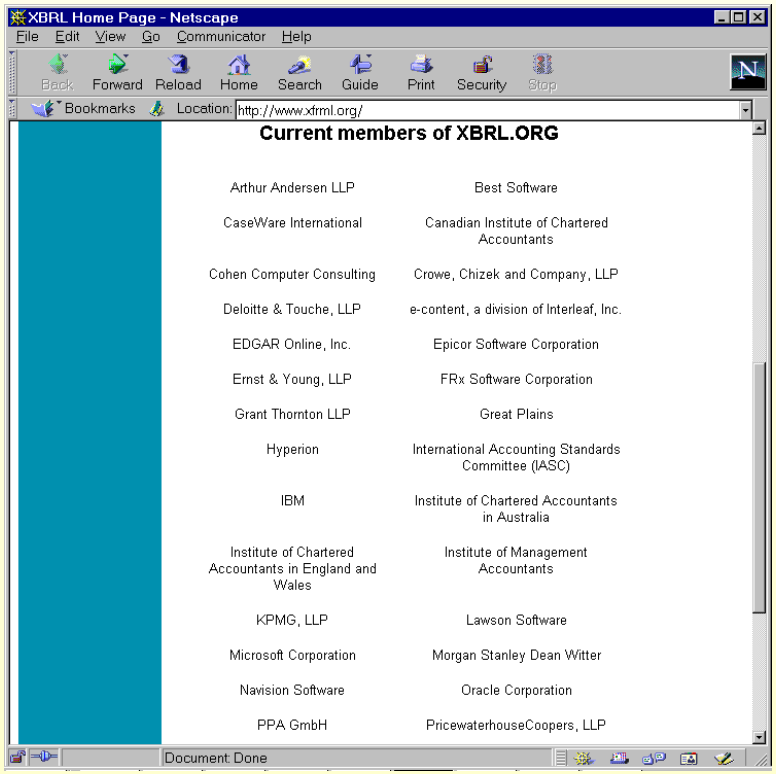
Consideration: Character Case

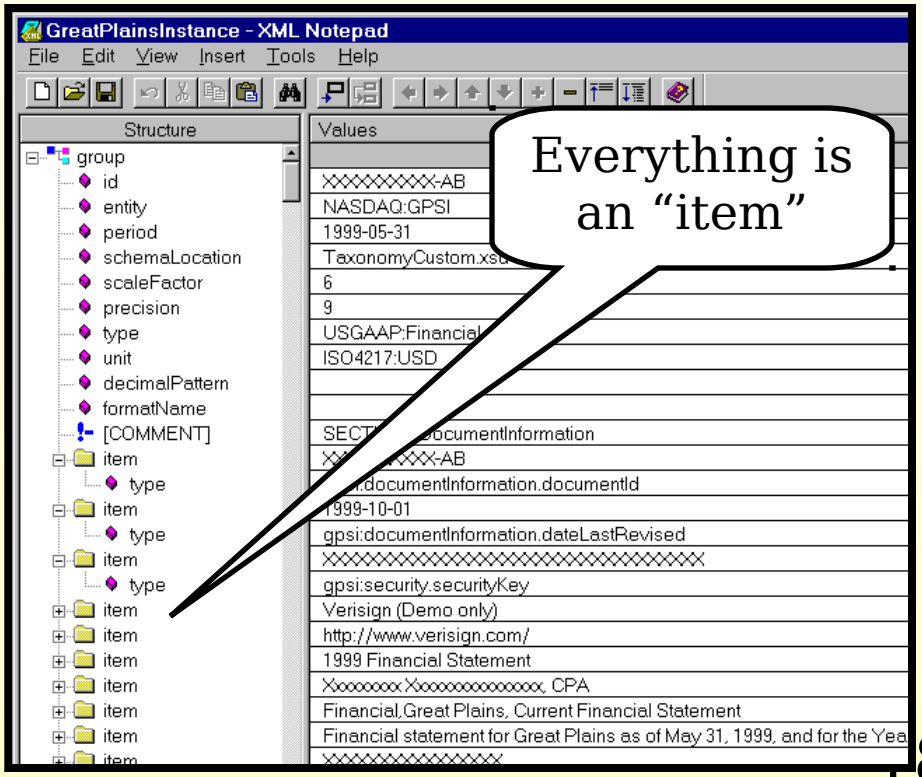
- Initial SHADE Recommendation (5/99): Use ALL CAPS
  - Pro:
    - Greater homogeneity ⇨ Reduces Mapping Complexity
  - Con:
    - Unnatural, harder to read, not practiced in industry
- Resolution: Mixed case can be used, but uniqueness is case insensitive in Registry
  - "InformationResourceTypeXMLElement" prevents:
    - informationresourcetypexmlelement
    - INFORMATIONRESOURCETYPEXMLELEMENT
    - InformationResourceTypeXmlElement
    - BUT DOES NOT PREVENT:
      - Information_Resource_Type_XML_Element

Consideration: Concern re: "Generic" schemas

- Pro:
  - Some Industry Backing
- Con:
  - Few Business Rules

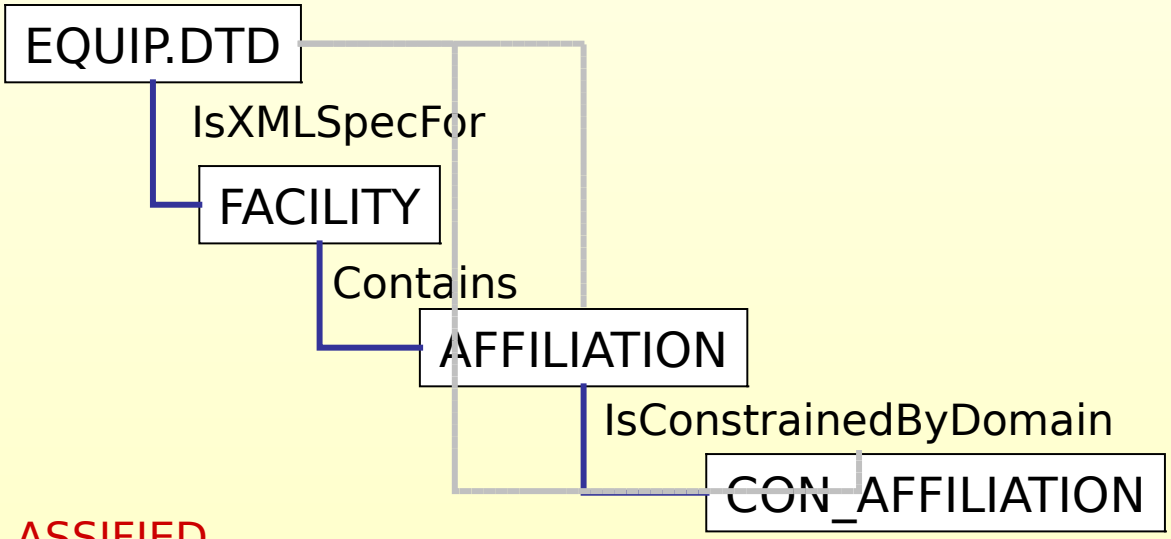






Consideration: Link schema to root element(s) only

- Pro:
  - Reduces number of stored associations between DTD and its numerous elements
- Con:
  - Currently requires repeated queries to find schemas associated with leaf elements and attributes



Consideration: Naming Elements and Attributes

Linking to Physical System

- Implications:
  - Developmental ⇨ Registered
- Pro:
  - Leverage semantics, CM of major DBs
  - CM with Physical System
  - Reduces Mapping Complexity
- Con:
  - Stove-Pipe
  - Brittle
  - Readability (but this is subjective)

- Digital Receipt
  - receipt
  - first_signing_date
  - signature
  - description
- MathML
  - array
  - arrayrow
  - arraycol
  - arraycel
  - hspace
  - vspace
- HyperLib
  - KW
  - OL
  - UL
  - LI
  - DL
  - DT
  - DD
  - EMPH
- USMARC
  - Fld011
  - Fld015
  - Fld017

Ultimately: Each Namespace Decides

Consideration: Naming of Container Elements

- When the container element holds a collection, use the plural of the item held in the collection:
  - Pro: Less Variability ⇨ Reduces Mapping Complexity
  - Con: Other options are available
    - Append “_Collection”